

## REMARKS

In response to the Office Action dated July 6, 2006, Applicant respectfully requests reconsideration and withdrawal of the rejections of the claims.

Claims 1, 4-7, 9 and 11 were rejected under 35 U.S.C. §102, on the basis of the *Quigley* patent (U.S. 5,324,248). The remaining claims were rejected under 35 U.S.C. §103 in view of the *Quigley* patent. To elucidate the distinctions between the present invention and the disclosure of the *Quigley* patent, the subject matter of claims 2 and 10 has been incorporated into claims 1 and 9, respectively. In view of these amendments and the remarks that follow, reconsideration and withdrawal of the rejections is respectfully requested.

In rejecting claims 2, 3, 8 and 10, the Office Action asserts that the particular filler material that is employed for the tubular structural member is a matter of choice, and concludes that the specific filler materials recited in this claims would have been obvious to a person of ordinary skill in the art. It is respectfully submitted that the Office Action fails to meet at least two of the three criteria for a *prima facie* case of obviousness, and therefore does not support the rejection.

One of the requirements for a *prima facie* case of obviousness, as set forth in MPEP §2143, is that "the prior art reference...must teach or suggest all the claim limitations." In the present case, the Office Action implicitly acknowledges that the *Quigley* patent does not teach a double-skin tubular structural member that includes a fiber-reinforced polymer outer tube, and inner tube made from generally metallic materials, and a filler material comprising a bound aggregate material between the outer and inner tubes. Furthermore, the Office Action does not point to any other prior art references that disclose, or otherwise suggest, the claimed elements that

are missing from the *Quigley* patent. Hence, the Office Action fails to establish that the prior art teaches or suggests all the claim limitations.

Another of the criteria for a *prima facie* case of obviousness is that "there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference..." It is respectfully submitted that there is no apparent motivation to employ a bound aggregate material within the tubular member disclosed in the *Quigley* patent. That patent is directed to the manufacture of a roller sleeve for a machine roll that is designed to handle webs of material, such as paper and fabric. For that purpose, the *Quigley* patent discloses that the intermediate layer 34 or 44b comprises a "damped body layer".

In contrast, the present application discloses composite structural materials that are designed for use in building various structures, such as bridges or buildings. As disclosed in the specification, for example at page 8, line 20 to page 9, line 10, the disclosed structures provide an enhanced ability to absorb energy before collapsing, and thereby exhibit resistance to corrosion, fire and earthquakes.

It is respectfully submitted that the Office Action has not identified any teaching that would motivate a person of ordinary skill in the art to employ a bound aggregate material, for example concrete, within the machine roll of the *Quigley* patent. In particular, there is no showing that such a bound aggregate material would function as a "damped body layer" of the type disclosed in that patent. Since the *Quigley* patent is directed to an objective which is entirely different from that of the present invention, there is no reason to employ a bound aggregate material within the machine roll of that patent.

In summary, the *Quigley* patent does not disclose all of the elements that are recited in currently pending claims 1 and 9, and no other references have been identified that suggest the differences between the disclosure of that patent and the pending claims. Furthermore, the Office Action does not provide any motivation that would lead a person of ordinary skill in the art to employ a bound aggregate material within the machine roll of the *Quigley* patent.

For at least these reasons, therefore, it is respectfully submitted that a *prima facie* case of obviousness has not been established. Reconsideration and withdrawal of the rejections, and allowance of all pending claims is respectfully requested.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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By: \_\_\_\_\_



James A. LaBarre  
Registration No. 28632

P.O. Box 1404  
Alexandria, VA 22313-1404  
703 836 6620